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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,582	08/25/2003	Junichi Takeuchi	NEC F-11100 DIV	3591
27667	7590	05/17/2004	EXAMINER	
HAYES, SOLOWAY P.C. 130 W. CUSHING STREET TUCSON, AZ 85701				NGUYEN, LONG T
ART UNIT		PAPER NUMBER		

2816
DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,582

Applicant(s)

TAKEUCHI, JUNICHI

Examiner

Long Nguyen

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 September 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 7-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 7-12 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 25 August 2003 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. 09/874,737.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/25/03 + 9/15/03.

4) Interview Summary (PTO-413)

Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to as failing to clearly describe in the operation of Figure 4 that current Id1 equals current Id2, and current Ic1 equals to current Ic2 to support for claimed subject matter (first and second current sources having the same first bias current flowing, and third and fourth current sources having the same second bias current flowing which recited in claims 7-10). Clarification and/or appropriate correction is required. No new matter should be entered.

Claim Objections

2. Claims 7-12 are objected to because of the following informalities:

Claims 7-12, it appears that "flowed" in these claims should be changed to --flown--.

Claim 8, lines 3 and 6, it appears that "has" should be changed to --controls--.

Claim 8, lines 3 and 6, it appears that "circuit have" should be changed to --circuit to have--.

Claim 9, line 14, it is suggested that "at least two gate types" be changed to --two conductivity types of transistors--.

Claim 10, lines 2 and 4, it appears that "has" should be changed to --controls--.

Claim 8, lines 2 and 4, it appears that "circuit have" should be changed to --circuit to have--.

Claim 12, lines 2 and 4, it appears that "has" should be changed to --controls--.

Claim 12, lines 2 and 4, it appears that "circuit have" should be changed to --circuit to have--.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 7-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Hogeboom (USP 6,194,949).

Figure 1 of Hogeboom discloses driver, which includes: a pair of push-pull circuits (PMOS 30 and NMOS 50, and PMOS 20 and NMOS 40) for driving a load circuit complementary (driving downstream circuitry at differential outputs 200 and 210); a first current source circuit (71) for having a first bias current (Idc which is the current of transistor 71) flown to the pair of push-pull circuits; a second current source circuit (81) for having the first bias current (Idc which is the current of transistor 81) flown from the pair of push-pull circuits; a third current source circuit (70) capable of having a second bias current (Ida which is the current of transistor 70) flown to the pair of push-pull circuits; a fourth current source circuit (80) capable of having the second bias current (Ida which is the current of transistor 80) flown from the pair of push-pull circuits; and a control circuit (90 in Figure 2) for varying the second bias current (Ida) flown by the third current source circuit (70) and the second bias current (Ida) flown by the fourth current source circuit (80) according to a control signal (signal at node 220 in Figure 2).

Note that, in claim 11, the first bias current (Idc which is the current of transistor 71), a second

bias current (I_{dc} which is the current of transistor 81), a third bias current (I_{da} which is the current of transistor 70), and a fourth bias current (I_{da} which is the current of transistor 80).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directly to Examiner Long Nguyen whose telephone number is (571) 272-1753. The Examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached at (571) 272-1740. The fax number for this group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 4, 2004



Long Nguyen
Primary Examiner
Art Unit: 2816